MAD RIVER SEDIMENT AND TURBIDITY TMDL INTRODUCTION MEETING

JULY 11, 2006

AGENDA

- Introductions: EPA, Graham Matthews & Associates (GMA), North Coast Regional Water Quality Control Board (Regional Board), stakeholders
- Introduction to the TMDL process
- Mad River TMDL development and schedule
- GMA turbidity sampling and sediment source analysis
- Data and information sharing:
- Blue Lake Rancheria turbidity sampling
- DFG and fish habitat concerns
- USFS
- Gravel mining/CHERT
- HBMWD concerns
- RCAA watershed planning efforts
- Open discussion
- Discussion may continue after lunch, as needed.

Clean Water Act Requires . . .

- As enacted in 1972, §303(d) of the Clean Water Act requires States to:
  - Identify waters not meeting State water quality standards -- §303(d) list
  - Set priorities for TMDL development
  - Develop a TMDL for each pollutant for each listed water
- EPA to approve or disapprove State submissions, and if disapproved, to act in lieu of State

Mad River Sediment/Turbidity TMDL

- EPA added the Mad River basin to California's 1992 303(d) list sediment and turbidity.
- EPA will establish these TMDLs in accordance w/ a consent decree; December 2007 is the deadline.
- The State will later adopt Mad River TMDLs, and will develop an implementation plan.
- The basin is also listed for temperature (as of 2002). The State will later develop and adopt a temperature TMDL; EPA will not develop a temperature TMDL at this time.

TMDL PROCESS

- Sediment source analysis (estimated completion July 2007)
- EPA drafts TMDL, receives public comment (estimated September 2007)
- EPA finalizes TMDL (estimated Nov 2007, no later than December 2007)
- NCRWQCB amends if necessary, develops implementation plan, and adopts.

Total Maximum Daily Load (TMDL)

- A TMDL or Total Maximum Daily Load is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources.

TMDL = Total Maximum Daily Load

- Total load of pollutant allowable while still ensuring water quality standards are met
- Sediment is main pollutant; turbidity on Mad River mainly related to sediment.
- Some sediment load is natural.
- Typically, EPA Region 9 expresses sediment TMDL in terms of average load, in tons/mi^2/yr, evaluated on a 10-year rolling avg
- Turbidity load will be correlated to suspended sediment load.

TMDL Definition

- TMDL = WLAs + LAs + MOS
  - WLA is wasteload allocation for point sources
  - LA is load allocations of nonpoint sources
  - MOS is margin of safety to account for uncertainty
- Must account for seasonal variability and critical conditions

Watershed

- 497 mi^2 (318,000 acres), river 90 mi long
- 30% federally managed (mostly USFS, upper watershed)
- Blue Lake Rancheria (tribal land)
- 70% privately owned (mostly middle and lower watershed)
- Fieldbrook, McKinleyville
- Timber harvest, gravel mining are main resource activities

Sediment TMDL: Standards & Existing Conditions

- Narrative water quality standards: Essentially, no suspended material, settleable material or suspended sediment discharge that “cause nuisance or adversely affect beneficial uses.”
- Decline of fish population
- 303(d) list 1992; most recent relisting 2002. Relisting (by State) includes temperature. Temperature TMDL not part of EPA consent decree.

Some Sediment TMDL Indicators (how we'll know if stream/watershed is meeting water quality standards)

Combination of instream and watershed factors, evaluated on whole

- Instream indicators: spawning gravel quality, turbidity and suspended sediment, riffle embeddedness, V*, aquatic insect production, thalweg profile, pool/riffle distribution & depth of primary pools
- Watershed indicators: diversion potential and stream crossing failure potential, hydrologic connectivity of roads, annual road inspection & correction, road location & sidecast, activities in unstable areas

Sediment & Turbidity TMDL

- Will be based on sediment source analysis, including existing information and that collected 2005-2007.
- Turbidity TMDL may be similar to Pajaro River turbidityTMDL
- Allocations (how to divide sediment/turbidity load among source types)
- Margin of Safety (assurance, given uncertainty, that WQS will be met)
  -conservative assumptions
  -portion of load non-allocated
- Implementation & Monitoring Recommendations (Regional Board responsible for adopting & implementing)

For More Information

- TMDL homepage - http://www.epa.gov/owow/tmdl
- Region 9 homepage
- http://www.epa.gov/region09/water/tmdl/
  - EPA guidance and documents
  - Status report on litigation
  - Maps and information on impaired waters
  - Links to other TMDL websites
  - Regulations and supporting information
- State homepage - http://www.waterboards.ca.gov/quality.html?counter=6645